

IN THE CLAIMS:

Claims 1-34 (cancelled).

35. (New) A method of transferring a particle, comprising the steps of:

providing a first beam of laser light;

forming a plurality of additional beams of laser light from the first beam of laser light;

establishing an optical trap for at least two of the additional beams of laser light, each said optical trap associated with a single one of the additional beams of laser light;

providing a plurality of manifolds over a time sequence, each of the plurality of manifolds comprising at least one optical trap with each of the plurality of manifolds spaced apart in the time sequence; and

sequentially illuminating and extinguishing over the time sequence each of the manifolds, enabling the capture and transfer of the particle from one of the manifolds to another of the manifolds, wherein the capture and transfer of the particle causes the particle to be transported by the plurality of manifolds.

36. (New) The method as defined in claim 35 wherein each of the plurality of manifolds comprises a line of optical traps.

37. (New) The method as defined in claim 36 wherein the plurality of manifolds comprise a plurality of lines of optical traps, each of the lines of optical traps sequentially activated and deactivated to enable capture and transport of the particle.

38. (New) The method as defined in claim 37 wherein the plurality of lines of optical traps are aligned substantially parallel.

39. (New) The method as defined in claim 37 wherein the plurality of lines of optical traps includes curved lines, each line having a radius of curvature.

40. (New) The method as defined in claim 35 wherein the plurality of manifolds comprise interwoven patterns.

41. (New) A method of performing optical peristalsis for manipulating matter, comprising the steps of:

providing a first beam of laser light;

forming a plurality of additional beams of laser light from the first beam of laser light;

establishing an optical trap for at least two of the additional beams of laser light with each said optical trap associated with a single one of the additional beams of laser light; and

providing a plurality of manifolds of the optical traps with each of the manifolds spaced apart over time and space to enable forming lines of optical traps at different spatial locations for manipulating the matter in time and space.

42. (New) The method as defined in claim 41 wherein the matter comprises at least one of a collection of particles and a manipulable mass.

43. (New) The method as defined in claim 41 wherein the plurality of manifolds are used to manipulate biological material.

44. (New) The method as defined in claim 43 wherein the manipulation involves moving a biological cell to at least one of a desired location and orientation.

45. (New) The method as defined in claim 43 wherein the manipulation involves deforming the biological material.

46. (New) A method of manipulating a biological material, comprising the steps of:

providing a first beam of laser light;

forming a plurality of additional beams of laser light from the first beam of laser light; and

establishing deterministic optical gradient conditions for each of the additional beams of laser light for manipulating biological material by establishing a plurality of

manifolds over time and space with each of the manifolds activated and then sequentially extinguished over time and space enabling the manipulation of the biological material.

47. (New) The method as defined in claim 46 wherein the plurality of manifolds comprise a plurality of lines of optical traps.

48. (New) The method as defined in claim 46 wherein each of the manifolds have an associated radius of curvature for the lines of optical traps.

49. (New) The method as defined in claim 46 wherein the biological material comprises a collection of biological particles.

50. (New) The method as defined in claim 49 wherein the particles are separated into a plurality of different particles.

REMARKS

New claims 35-50 are in the case, and the Applicants respectfully request consideration of these new claims.

Claims 1-34 were rejected as claiming the same invention, and these claims have been cancelled. New claims 35-50 include a different set of inventions not claimed in USPN 6,639,208. These new claims are generally related to the issued claims for the '208 patent but embody different combinations of elements. For example new claim 35 is directed generally to optical peristalsis for transferring a particle in time and space with optical traps being formed from the laser beams with a trap associated with each laser beam. A plurality of manifolds are